

**City of Greensboro Planning Department
Zoning Staff Report and
Plan Amendment Evaluation
March 14, 2005 Joint Public Hearing**

The information provided in this staff report has been included for the purpose of reviewing proposed zoning changes. Since the zoning process does not require a site plan, there may be additional requirements placed on the property through the Technical Review Committee process to address subdivision and development regulations.

Item: A -1 & A-2

Location: North side of Fleming Road west of Briarbend Road and the terminus of Chance Road, and south of the Greensboro Urban Loop

Applicant: Zimmer Management Company

Owner: Multiple Owners

Generalized Future Land Use Map

From: Low Residential, Mixed Use Corporate Park, and Industrial/Corporate Park

To: Mixed Use Commercial

Zoning

From: County Zoning Agricultural, RS-40 and Conditional Use – General Office Moderate Intensity

To: City Zoning Conditional District – Planned Unit Development – Mixed

- Conditions:**
- 1) On Tract 1, as shown on the Zoning Sketch Plan entitled “CD-PDM Sketch Plan Fleming Road at Chance Road, Friendship Township, Guilford County, Greensboro, North Carolina”, there will be a maximum of 105,000 square feet of retail space on 16.2± acres having a maximum building height of thirty feet (30’).
 - 2) On Tract 2, there will be a maximum of 70,000 square feet of retail space and a maximum of 75,000 square feet of office/corporate space on 14.5± acres having a maximum building height of eighty (80’).
 - 3) On Tract 3, there will be a maximum of 15,000 square feet of retail space and a maximum of 100,000 square feet of office/corporate space on 7.3± acres with a maximum building height of (80’).
 - 4) On Tract 4, there will be a maximum of 160 residential units designed for sale on 12.8± acres with a maximum building height of fifty (50’).
 - 5) There shall be no connection between this property and Huntington Subdivision (also known as Meadowbriar Subdivision).
 - 6) A buffer having a minimum width of 75 feet (75’) shall be provided along the property line abutting Huntington Subdivision.
 - 7) All residential units shall be designed for sale.
 - 8) All exterior lighting fixtures in parking areas and driveways shall utilize cutoff shields or other appropriate measures to reduce spillover glare beyond the boundaries of the property.
 - 9) Where buildings are visible from the Huntington Subdivision, the following methods shall be used to minimize the impact on the Huntington Subdivision:

- a. Additional Landscaping shall be placed in areas where the sides and rear of buildings are visible from Huntington Subdivision.
 - b. Full height parapet walls shall be used to fully screen any rooftop equipment from view from Huntington Subdivision.
 - c. HVAC units, loading docks, trash collection and other service areas shall be designed to match the elements of the building architecture and landscaping plan. These areas shall also be screened from view using fencing or additional tree/plant material.
- 10) All buildings in the development adjacent to Huntington Subdivision will:
- a. Maintain a consistent architectural theme throughout the development.
 - b. Utilize brick within the exterior building facade to provide visual interest. A minimum of 30% shall be required.

SITE INFORMATION	
Max. Developable Units & Density	160
Net Density of Developable Land	160
Existing Land Use	Undeveloped
Acreage	63.76
Physical Characteristics	<i>Topography:</i> Rolling <i>Vegetation:</i> Open Fields & Mature Trees <i>Other:</i> N/A
Overlay Districts	Airport Overlay District
Historic District/Resources	N/A
Generalized Future Land Use	Low Residential, Mixed Use Corporate Park, and Industrial/Corporate Park
Other	60 DNL Airport Noise Cone

SURROUNDING ZONING AND LAND USE		
Location	Land Use	Zoning
<i>North</i>	Undeveloped	Co. AG
<i>South</i>	McCalister Place (Single Family Detached & Attached Dwellings)	CD-RM-5
<i>East</i>	Single Family Dwellings	RS-40(CL) & RS-9(CL)
<i>West</i>	Undeveloped	CD-RM-5

ZONING HISTORY		
Case #	Year	Request Summary
N/A		

DIFFERENCES BETWEEN COUNTY AG, RS-40 & GO-M (EXISTING) AND CITY CD-PM (PROPOSED) ZONING DISTRICTS	
N/A	

TRANSPORTATION	
Street Classification	Flemming Road – Minor Thoroughfare, Lewiston Road – Major Thoroughfare, Urban Loop - Freeway.
Site Access	This development will include the extension of Flemming/Lewiston Road and the Chance Road connection. This development is proposing 4 access points along the Flemming/Lewiston Road extension. GDOT will not approve 4.
Traffic Counts	24 hour counts unavailable.
Trip Generation	24 Hour Weekday = 22,139, AM Peak Hour = 1,356, PM Peak Hour = 2,163, Saturday Peak Hour = 2,507.
Sidewalks	Requirement per Development Ordinance.
Transit	No.
Traffic Impact Study	Yes, required per TIS Ordinance. See the Additional Information section of the staff report for the Executive Summary
Street Connectivity	Yes, see the Additional Information section of the staff report to review the street connectivity criteria for the Chance Road connection.
Other	N/A.

ENVIRONMENTAL REVIEW	
Water Supply Watershed	Yes, Greensboro
Floodplains	100yr floodplain is approximately 500' from property line on current regulated FIRM maps. 100yr floodplain is on-site per new city maps that will most likely be adopted in the future.
Streams	The 2 main channels and the pond are perennial. They require a 100' buffer on each side from top of bank. No BUA is allowed in the buffer. There are several other unclassified channels. If perennial, they require the same buffer as the main channel.
Other	Site can have up to 70% BUA.

LANDSCAPING REQUIREMENTS	
Location	Required Planting Yard Type and Rate
<i>North</i>	N/A
<i>South</i>	N/A
<i>East</i>	N/A
<i>West</i>	N/A

CONNECTIONS 2025 COMPREHENSIVE PLAN POLICIES

Connections 2025 Written Policies:

POLICY 9A.5: Continue to link City-initiated annexations and approvals of annexation petitions for water/sewer extension policies regarding designated growth areas.

Connections 2025 Map Policies:

The area requested for rezoning lies within the following map classifications:

Existing:

Low Residential (3-5 d.u./acre): This category includes the City's predominantly single-family neighborhoods as well as other compatible housing types that can be accommodated within this density range. Although there are some existing residential areas in the City developed on lots greater than 1/3 acre, future residential developments and "conventional" subdivisions should generally maintain a gross density of no less than three dwellings per acre, except where environmental constraints (e.g., the Watershed Critical Area) prevent such densities from being achieved. Compact developments that include clustered, small lots with substantial retained open space are encouraged.

Mixed Use Corporate Park: This designation is intended for large tracts of undeveloped land near the City's fringe that are appropriate for well planned, larger scale business/employment parks with supporting uses such as retail, hotels, and residential. Primary uses such as office, flex office, technology research and development, light manufacturing, distribution, and assembly are strongly encouraged to be developed prior to or in conjunction with any supportive uses. The primary uses should be developed in a campus-like or "corporate park" setting with generous, linked open space to maximize value and to promote visual quality and compatibility with the surrounding area. Pedestrian-friendly features such as buildings placed near the street, sidewalks, and trails leading to nearby uses such as retail and housing should be encouraged. (CP-04-12, Ord. No. 05-34, 2-15-05)

Industrial/Corporate Park: This designation applies to areas where present or anticipated uses include both light and heavy industrial uses, such as manufacturing, assembly, and fabrication; wholesaling and distribution; and corporate office and technology parks, which may be introduced to replace older heavy industrial uses. Although new residential development is discouraged in areas designated for this land use category, pre-existing residential uses may be present in or adjacent to these areas. As established industrial areas redevelop, such residential, institutional, or similar uses should be protected from adverse impacts (heavy truck traffic, significant outside storage, factors such as noise, dust, and glare, etc.) through performance-based standards, buffers, and proper separation from noxious uses.

Proposed:

Mixed Use Commercial:

This designation is intended to promote a mix of uses, of which various commercial uses remain predominant, but where residential, service, and other uses are complementary. Where applied to older highway corridors characterized by "strip" commercial uses, the intent is to encourage infill and redevelopment for a more diverse and attractive mix of uses over time. Examples include residential units over commercial uses or a wider array of economically viable uses to replace obsolete uses. Such areas also may represent opportunities for the introduction of substantial higher density and/or mixed-income housing, with negligible impacts on, or resistance from, nearby single-family neighborhoods. Ensuring that buildings are of the

appropriate scale and intensity is critical, as is ensuring that sites are designed in a coordinated, as opposed to a lot-by-lot, manner. New “strip” commercial development is discouraged. (CP-04-12, Ord. No. 05-34, 2-15-05)

Tier One (Current Growth Area): Where infrastructure systems are in place, can be economically provided and/or will be proactively extended and where continued annexation and consolidation of the City’s development pattern shall be encouraged over the next ten years.

CONFORMITY WITH OTHER PLANS

The following aspects of relevant plans may be applicable in this case:

City Plans:

Other Plans: The 60 DNL Noise Contour bisects this tract in a northeast/southwest direction. The area north of the Noise Contour is included in the Airport Overlay District. The Airport Area Plan Update, endorsed by City Council on June 18, 2002, defines a Noise Impact Disclosure Area as areas within the 60 DNL noise contour, plus an area northeast of the airport that may periodically experience high noise levels. Within the Disclosure Area, disclosure statements for existing residences plus noise mitigation building techniques and aviation easements for new development are appropriate. The Airport Area Plan Update classifies land within the 60 DNL in this area as Non-Residential, a broad category that includes both light and heavy industrial uses, offices, warehouses, service-oriented commercial activities and other types of development that are not noise-sensitive. In this area, new development that locates adjacent to residential subdivisions built prior to the adoption of the plan should contain uses that are compatible with residential development.

COMPREHENSIVE PLAN ANALYSIS

Need for the Proposed Change:

This case involves an annexation, a rezoning to Conditional District –Planned Unit Development-Mixed, and an amendment to the Comprehensive Plan Generalized Future Land Use Map from the Low Residential, Mixed Use Corporate Park, and Industrial/Corporate Park classifications to Mixed Use Commercial.

According to the submitted sketch plan the developer is proposing 105,000 square feet of retail space. According to the Urban Land Institute Shopping Center Development Handbook, shopping centers of this size typically draw from an area of approximately 3-5 miles. Within a 3-mile radius of this site there are eight existing grocery stores and one proposed grocery store at the northeast intersection of US 220 and Old Battleground Avenue that was rezoned in February 2005. The closest grocery is approximately ½ mile west of this site. In light of this information, staff does not see a need for a change in land use classification to provide more commercial development in the area.

Effect of the proposed Change on the Need for City Services and Facilities (e.g. roadway level of service, traffic counts, planned road improvements, transit, accidents statistics, and environmental constraints such as; location within a Water Supply Watershed, floodplain, streams):

GDOT:

This section of the Loop is scheduled for approximately the year 2008. The proposed construction of the Urban Loop/Lewiston Road interchange is to follow sometime after the year 2010.

This developer will be coordinating with the adjacent developer to realign the intersection of Fleming Road/Lewiston Road and Isaacson Boulevard/Fleming Road.

Water Resources:

Channels that carry public water will require a Drainage maintenance and utility easement depending on the flow that they carry.

Site may require on-site detention to meet quantity ordinance.

A BMP must be provided to treat all proposed BUA. BMPs must also treat any previously untreated off-site BUA that flows into them. This includes the existing pond if it is to be modified to treat any proposed BUA.

Site may potentially have wetlands. If any disturbance to wetlands is proposed and/or any stream crossing is proposed permits will have to be obtained from the state and corps of engineers prior to construction.

If the existing pond is to be modified to meet watershed regulations, permits must be obtained from the state and corps. Pond must meet City standards and must also treat any off-site untreated BUA that flows into it.

Implications, if any, the Amendment may have for Other Parts of the Plan:

This property is in the Tier One (Current Growth Area) as identified in Connections 2025 and therefore growth is supported in this area, however, the land use designation for this area is for Low Residential outside the noise cone, and for Mixed Use Corporate Park and Industrial/Corporate Park inside the noise cone. The airport is approximately 1.5 miles southwest of this site and with the new Lewiston Road/Urban Loop interchange which is proposed to abut and cut through this site, staff feels that corporate/industrial/warehousing and distribution uses are most appropriate for the area. With the opening of the Fed-Ex hub in 2009 it is important to reserve land for such corporate/industrial uses, especially within the noise cone and within a few minutes drive of the airport.

As defined, the Mixed Use Corporate Park land use classification is intended for large tracts of undeveloped land near the City's fringe that are appropriate for well planned, larger scale business/employment parks with supporting uses such as retail, hotels, and residential. Primary uses such as office, flex office, technology research and development, light manufacturing, distribution, and assembly are strongly encouraged to be developed prior to or in conjunction with any supportive uses. This land use classification is best suited to support the future growth of the employment opportunities associated with the airport.

The Mixed Use Commercial classification is intended to promote a mix of uses, of which various commercial uses remain predominant, but where residential, service, and other uses are complementary. This land use classification is designated primarily for retail uses and therefore it does not promote the employment opportunities that would best support the future growth of the airport area.

According to the submitted site plan consisting of approximately 63 acres, 16 acres are designated as retail, 13 acres are designated as multi-family, and 22 acres are designated as retail/office/corporate. As worded there is no guarantee that any of the 22 acres will actually be developed as corporate or office. The conditions do offer maximum square footage figures for the office/corporate and retail, but there are no minimums or guarantees that any office or corporate uses will be built. Based on the numbers provided in the conditions, the square footage for retail is higher than that of the square footage for office/corporate. These proportions do meet the definition of Mixed Use Commercial, but staff does not support this change in land use classification.

The existing Low Residential land use classification that is located south of the noise cone and abutting Fleming Road is compatible with the existing and developing residential within the area. Therefore, this classification should not be changed to Mixed Use Commercial. According to the applicant's approved sketch plan, what is presently indicated as Low Residential (3-5 dwelling units/acre) would be developed at a density of approximately 12.5 units per acre. Staff feels that this would be out of scale and character with existing adjacent and nearby development. Furthermore, low residential density in this area is more consistent with the view that development adjacent to the noise contour should be kept as low as possible due to noise and safety concerns.

Unforeseen Circumstances or the Emergence of New Information (e.g. significant economic opportunity in Tier 2 or 3):

The proposed Lewiston Road/Urban Loop interchange was not proposed at the time the Plan was written, but the creation of the interchange further supports the Mixed Use Corporate Park designation due to the improved access to the airport.

STAFF COMMENTS

Planning: This property abuts the primary city limits on its east and south sides. The east side adjoins Huntington Subdivision, and the south side adjoins a connector street to be constructed between Fleming Road and Horse Pen Creek Road.

The property is in Tier One (Current Growth Area) on the Growth Strategy Map of Connections 2025. It presently contains a few houses along Chance Road.

The developer of McAlister Place Townhomes just to the south is extending a water line up Fleming Road to the south of this property. There is also an 8-inch water line stubbed to the eastern property line. There is an existing 8-inch sewer outfall (scheduled for upgrading to 18-inch) alongside the eastern line of the subject property, and this property drains toward it.

The provision of most city services would be comparable to their provision to the townhouse development immediately to the south.

At the February 15, 2005 meeting, the Greensboro Planning Board unanimously recommended annexation of this property.

STAFF RECOMMENDATION

Based on the information provided in this report staff recommends denial of both the change in classification to the Generalized Future Land Use Map and the proposed original zoning request primarily due to:

- proximity to the airport and the need to provide land for corporate/FedEx spin-off development within 1.5 miles of the airport
- the presence of eight existing grocery stores within a 3-mile radius and one proposed shopping center at the northeast corner of US 220 and Old Battleground
- compatibility of current land use classifications with the surroundings

If this case is approved, it is important to note that zoning condition #5 which states that there shall be no connection between this property and Huntington Subdivision is in conflict with the City's Street Connectivity Policy (see below for the analysis).

ADDITIONAL INFORMATION

Street Connection Policy:

In accordance with Section 30-6.13.3 (C) of the Greensboro Development Ordinance, street extensions that extend from existing neighborhood through a proposed development site into or through another existing neighborhood shall be evaluated and established based on the following criteria:

1. Emergency Response Times:

How much a street connection may decrease emergency response times or enhance emergency vehicle access. (Fire Department to evaluate)

- The connection is recommended in order to provide improved access to the proposed development from the planned fire station at Horsepen Creek Road and Drawbridge Parkway.
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2. Excessive Block Lengths:

Evaluate current neighborhood block lengths and determine if a street connection is needed. (Planning Department to evaluate)

- The existing block perimeter of over 31,000 feet in this area is well in excess of the 6,000 feet desired. This proposed connection of Chance Road in combination with the completion of the Horsepen Creek-Fleming Connector currently under construction would provide a sub-block within this perimeter of approximately 5,900 feet.
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3. Traffic Congestion:

Existing and/or anticipated street patterns warrant a street connection(s) in order to reduce traffic congestion. (Greensboro Department of Transportation to evaluate)

- The proposed street connection is not anticipated to increase or reduce traffic congestion in this area.
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4. Pedestrian:

Existing street and sidewalk patterns warrant a street connection(s) and or sidewalk connection(s) to enhance pedestrian and bicyclist activities. (Greensboro Department of Transportation to evaluate)

- The proposed street connection will enhance pedestrian and bicycle activity between the existing neighborhood, and the proposed development.
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5. Coordinated Street Plan:

A street connection fits into adopted street plans (thoroughfare plan, collector street plan, local street plan) (Greensboro Department of Transportation to evaluate)

- The proposed local street connection is consistent with adopted thoroughfare, and the draft collector street plan for this area. The proposed street connection is also consistent with previous street patterns for this area, as evidenced by the naming of the existing Chance Road street stubs and the installation of a culvert at the stream crossing.

6. Extraneous Traffic:

Whether or not a proposed street connections(s) would encourage traffic volumes with origins and destinations outside the existing neighborhood or encourage truck traffic to pass through the neighborhood. (Greensboro Department of Transportation to evaluate)

- The proposed street connection is not anticipated to encourage extraneous traffic to utilize this local street network. To further reduce the potential for extraneous traffic, the extension should be designed as an indirect connection to either the Horsepen Creek-Fleming Connector currently under construction, or the planned Fleming-Lewiston Connector.

7. Impacts to Natural Areas:

Whether or not a proposed street connection(s) would adversely affect streams, lakes/ponds, and whether or not there are topographical barriers or unique natural areas. (Greensboro Department of Transportation, Water Resources Department, and Parks and Recreation Department to evaluate)

- The existing culvert crossing for Chance Road should be utilized to reduce the potential for additional impacts to natural areas.

8. Impacts to Public Facilities:

Whether or not a proposed street connection(s) would adversely affect other public facilities such as parks, bike trails, nature trails, and natural areas. (Greensboro Department of Transportation and parks and Recreation Department to evaluate public facilities)

- The proposed street connection would have no impact on existing or planned public facilities in this area.

9. Public Service Delivery:

Whether or not a proposed street connection would enhance delivery of public services. (Greensboro Department of Transportation and other appropriate departments to evaluate)

- The proposed street connection would improve the delivery of public services such as solid waste collection, and school bus routing.

Public Involvement Procedure:

When the initial analysis by city of Greensboro staff indicates a proposed street connection is warranted (based on a review of criteria 1-9) and prior to City of Greensboro staff making a

recommendation to the Technical Review Committee, an in information gathering meeting will be held with adjacent property owners to seek additional information related to criteria 1-9. (Greensboro department of Transportation to coordinate public involvement)

Staff Recommendation:

Based on a review of the nine technical criteria described above, the proposed street extension and connection of Chance Road to either the Horsepen Creek- Fleming Connector, or the Fleming-Lewiston Connector is warranted. The proposed extension should be designed as an indirect connection to reduce the potential for extraneous traffic, and the existing culvert crossing should be utilized to reduce the environmental impacts.

Should an appeal of a TRC plat denial be made, this form (and attached map showing all proposed street connection locations and public involvement summary) will be provided to the Planning Board and City Council for their use and consideration in the appeals process.

EXECUTIVE SUMMARY

This report summarizes the findings of the Transportation Impact Study (TIS) performed for the proposed mixed-use development in Greensboro, North Carolina. Based on the conceptual land use plan, and per our discussions with the Zimmer Development Company, it is our understanding that the proposed mixed-use development will consist of 190,000 square feet of retail space (including nine outparcels), 175,000 square feet of office space, and 160 townhomes. While the outparcels could consist of a variety of land uses, this study assumed that the outparcels would consist of two (2) 3,000 square foot drive-in banks, three (3) 6,000 square foot high-turnover (sit-down) restaurants, two (2) 3,000 square foot fast-food restaurants with drive-through windows, one (1) 12,000 square foot pharmacy with drive-through window, and a gasoline station with convenience market with 8 fueling positions. It is anticipated that the development will be completely built out in 2010.

Access to the mixed-use development is proposed to be provided via four (4) access connections on the Fleming-Lewiston Road Connector. Two (2) full access connections are proposed on the Fleming-Lewiston Road Connector, while movements will be restricted at the remaining two (2) access connections. Full access connections are also proposed on Fleming Road and the Fleming-Horse Pen Creek Road Connector.

The purpose of this study is to determine the potential impacts to the surrounding transportation system caused by the additional traffic generated by the proposed mixed-use development. In order to accomplish this objective, this study analyzed future (2010) 'no build' and 'build' traffic conditions during the weekday a.m. and p.m. peak hours as well as the Saturday mid-day peak hour.

The following table summarizes the trip generation for the proposed development.

Land Use (ITE Code)	Density	Daily Traffic	AM Peak		PM Peak		Saturday	
			Enter	Exit	Enter	Exit	Enter	Exit
Retail (820)	147,000 sf	8,724	120	77	388	420	578	534
Drive-In Bank (912)	3,000 sf	739	21	16	69	69	57	55
Drive-In Bank (912)	3,000 sf	739	21	16	69	69	57	55
Sit-Down Rest. (932)	6,000 sf	763	36	33	40	26	76	44
Sit-Down Rest. (932)	6,000 sf	763	36	33	40	26	76	44
Sit-Down Rest. (932)	6,000 sf	763	36	33	40	26	76	44
Fast-Food w Drive-Thru (934)	3,000 sf	1,488	81	78	54	50	91	87
Fast-Food w Drive-Thru (934)	3,000 sf	1,488	81	78	54	50	91	87
Pharmacy w/ Drive-Thru (881)	12,000 sf	1,058	18	14	51	53	47	47
Gas Station w/ Conv. Market (945)	16 pumps	2,604	80	80	107	107	107	107
Office (710)	175,000 sf	2,053	258	35	47	228	31	27
Townhomes (230)	160 units	957	13	62	59	29	48	41
Sub-Total		22,139	801	555	1,018	1,153	1,335	1,172
<i>Pass-By Trips</i>			<i>104</i>	<i>104</i>	<i>283</i>	<i>283</i>		
Primary (New) Trips			697	451	735	870	1,335	1,172

It is estimated that the development could generate a total 22,139 trips (entering and exiting) during a typical weekday. On an average weekday, the proposed development could generate 1,356 trips (801 entering and 555 exiting) during the AM peak hour and 2,163 trips (1,018 entering and 1,153 exiting) during the PM peak hour. On a typical Saturday, the proposed development could generate 2,507 trips (1,335 entering and 1,172 exiting). However, considering the retail component, not all of these trips will exist as new trips to the transportation network, a portion of these trips will be attracted to the site from traffic traveling on adjacent roadways that provide direct access to the site (i.e., pass-by trips). With adjustments made to account for pass-by/diverted trips, the development could generate 1,148 trips (697 entering and 451 exiting) during the AM peak hour and 1,605 trips (735 entering and 870 exiting) during the PM peak hour.

The following tables summarize the capacity analysis results for study intersections.

Analysis of Future 'No Build' Traffic Conditions

Intersection	A p p r o a c h	Lane Configurations	AM Peak Hour		PM Peak Hour		Saturday Peak Hour	
			Approach	Overall	Approach	Overall	Approach	Overall
Fleming Road (NB/EB) And Fleming-Lewiston Road Connector (SB) / Fleming- Horse Pen Creek Road Connector (WB) (Signalized)	NB SB EB WB	1 LT, 1 TH, 1 TH-RT 1 LT, 1 TH, 1 TH-RT 1 LT, 1 TH-RT 1 LT, 1 TH, 1 RT	A A B C	B (13.4)	A A C C	B (13.5)	A A C C	B (13.5)
Fleming-Lewiston Road Connector (NB/SB) And Western Urban Loop EB Ramp (EB) (Signalized)	NB SB EB	1 TH, 1 TH-RT 1 LT, 2 TH 1 LT, 1 RT	B A C	B (17.9)	C B C	C (20.7)	C B C	C (21.0)
Fleming-Lewiston Road Connector (NB/SB) And Western Urban Loop WB Ramp (WB) (Signalized)	NB SB WB	1 LT, 2 TH 1 TH, 1 TH-RT 1 LT, 1 RT	A A B	A (4.5)	A A B	A (4.9)	A A B	A (4.8)

Signalized Analysis of Future 'Build' Traffic Conditions

Intersection	A p p r o a c h	Lane Configurations	AM Peak Hour		PM Peak Hour		Saturday Peak Hour	
			Approach	Overall	Approach	Overall	Approach	Overall
Fleming Road (NB/EB) And Fleming-Lewiston Road Connector (SB) / Fleming- Horse Pen Creek Road Connector (WB) (Signalized)	NB SB EB WB	1 LT, 1 TH, 1 TH-RT 1 LT, 1 TH, 1 TH-RT 1 LT, 1 TH-RT 1 LT, 1 TH, 1 TH-RT	A A B B	B (12.4)	A A C B	B (11.1)	B A C B	B (15.1)
Fleming-Lewiston Road Connector (NB/SB) And Western Urban Loop EB Ramp (EB) (Signalized)	NB SB EB	2 TH, 1 RT 1 LT, 2 TH 1 LT, 1 RT	B B B	B (14.3)	B B B	B (17.6)	C B C	B (19.6)
Fleming-Lewiston Road Connector (NB/SB) And Western Urban Loop WB Ramp (WB) (Signalized)	NB SB WB	1 LT, 2 TH 1 TH, 1 TH-RT 1 LT, 1 RT	A B C	B (13.8)	A B C	B (13.5)	B C C	B (19.9)
Fleming-Lewiston Road Connector (NB/SB) And Site Access 2 (EB/WB) (Signalized)	NB SB EB WB	1 LT, 1 TH, 1 TH-RT 1 LT, 2 TH, 1 RT 1 LT, 1 TH-RT 1 LT, 1 TH-RT	A A C A	A (6.6)	A A C A	A (9.6)	A A C A	A (8.4)
Fleming-Lewiston Road Connector (NB/SB) And Site Access 3 (EB/WB) (Signalized)	NB SB EB WB	1 LT, 2 TH, 1 RT 1 LT, 2 TH, 1 RT 1 LT, 1 TH-RT 1 LT, 1 TH-RT	A A C C	A (4.9)	A A C B	A (9.5)	B A C B	B (13.5)

Bold type denotes lane and/or traffic control improvements as well as revised lane configurations.

Unsignalized Analysis of Future ‘Build’ Traffic Conditions

Intersection	A p p r o a c h	Lane Configurations	AM Peak Hour		PM Peak Hour		Saturday Peak Hour	
			Approach	Overall	Approach	Overall	Approach	Overall
Fleming-Lewiston Road Connector (NB/SB) And Site Access 1 (EB/WB) (Unsignalized)	NB SB EB WB	1 LT, 1 TH, 1 TH-RT 1 LT, 1 TH, 1 TH-RT 1 RT 1 RT	A ¹ A ¹ A ² A ²		A ¹ A ¹ B ² A ²		A ¹ A ¹ B ² A ²	
Fleming-Lewiston Road Connector (NB/SB) And Site Access 4 (EB/WB) (Unsignalized)	NB SB EB WB	1 TH, 1 TH-RT 2 TH, 1 RT 1 RT 1 RT	A ² B ²		B ² B ²		B ² B ²	
Fleming Road (EB/WB) And Site Access 5 (SB) (Unsignalized)	EB WB SB	1 LT, 1 TH 1 TH-RT 1 LT, 1 RT	A ¹ B ²		A ¹ B ²		A ¹ C ²	
Fleming-Horse Pen Creek Road Connector (EB/WB) And Portrait Homes (NB) / Site Access 6 (SB) (Unsignalized)	EB WB NB SB	1 LT, 1 TH, 1 TH-RT 1 LT, 1 TH, 1 TH-RT 1 LT-TH, 1 RT 1 LT-TH, 1 RT	A ¹ A ¹ C ² B ²		A ¹ A ¹ C ² B ²		A ¹ A ¹ C ² B ²	

Bold type denotes lane and/or traffic control improvements as well as revised lane configurations.

1. Level of service for left turn movement on major approach.
2. Level of service for minor approach.

Future (2010) ‘No Build’ Traffic Conditions

Under future (2010) ‘No Build’ traffic conditions, the signalized intersections on the Fleming-Lewiston Road Connector at Fleming Road/Fleming-Horse Pen Creek Road Connector and the Western Urban Loop’s Eastbound and Westbound Ramps are expected to operate at an acceptable overall LOS C or better during the AM, PM, and Saturday peak hours. In addition, all intersection approaches are expected to operate at LOS C or better. Please be advised that a reduction in overall delay is anticipated at some intersections due to the addition of geometric improvements and/or adjustments to the signal timing.

Left turn lanes are provided on all approaches at the intersection of the Fleming-Lewiston Road Connector at Fleming Road/Fleming-Horse Pen Creek Road Connector as well as the northbound and southbound approaches of the Fleming-Lewiston Road Connector at the Western Urban Loop's Westbound and Eastbound Ramps, respectively. As previously mentioned, a right turn lane is warranted on the southbound approach of the Fleming-Lewiston Road Connector at the Western Urban Loop's Westbound Ramp based on the right turn lane warrants contained in the GDOT's Driveway Manual; however, the intersection was not analyzed with an exclusive right turn lane based on the laneage that was illustrated in the Feasibility Study. Considering that a right turn lane is warranted under the 'no build' traffic conditions, as well as the fact that the proposed development is not anticipated to add any traffic to this turn movement, the developer should not be responsible for this improvement if a right turn lane should be needed at a future date.

Future (2010) 'Build' Traffic Conditions

Under future (2010) 'Build' traffic conditions, the signalized intersections on the Fleming-Lewiston Road Connector at Fleming Road/Fleming-Horse Pen Creek Road Connector and the Western Urban Loop's Eastbound and Westbound Ramps, as well as Site Access 2 and Site Access 3, are expected to operate at an acceptable overall LOS C or better during the AM, PM, and Saturday peak hours. In addition, all intersection approaches are expected to operate at LOS C or better. Although the eastbound approaches of Site Access 2 and Site Access 3 are expected to operate at an acceptable LOS B or better, dual left turn capability may need to be provided to reduce the possibility of queues backing up into the development during peak times. This could be accomplished by stripping the proposed two-lane driveway approach to provide an exclusive left turn lane and a shared left-through-right lane. Another option would be to widen the driveways to provide three-lane approaches that consist of exclusive dual left turn lanes and a shared through-right lane.

Right turn lanes will be provided on the northbound approach of the Fleming-Lewiston Road Connector at the Western Urban Loop's Eastbound Ramp and Site Access 3. Right turn lanes will also be provided on the southbound approach of the Fleming-Lewiston Road Connector at Site Access 2 and Site Access 3. Left turn lanes will be provided on the northbound and southbound approaches of the Fleming-Lewiston Road Connector at Site Access 2 and Site Access 3.

As for the unsignalized access connections, the left turn movements from the Fleming-Lewiston Road Connector, Fleming Road, and the Fleming-Horse Pen Creek Road Connector as well as the minor approaches of the access connections are expected to experience minor to moderate delays and operate at LOS C or better during the AM, PM, and Saturday peak hours under future (2010) 'Build' traffic conditions.

A right turn lane will be provided on the southbound approach of the Fleming-Lewiston Road Connector at Site Access 4. Left turn lanes will be provided on the northbound and southbound approaches of the Fleming-Lewiston Road Connector at Site Access 1. Left turn lanes will also be provided on Fleming Road at Site Access 5 and the Fleming-Horse Pen Creek Road Connector at Site Access 6.

The following specific geometric improvements have been identified and should be provided in conjunction with the proposed development. The improvements should be coordinated with the Portrait Home improvements as well as the Western Urban Loop improvements.

Intersection of Fleming Road and Fleming-Lewiston Road Connector/Fleming-Horse Pen Creek Road Connector

- Provide a minimum of 200 feet of left turn storage and a 100 foot bay taper on the northbound approach of Fleming Road. Provide a minimum of 100 feet of right turn storage and a 100 foot bay taper on the northbound approach of Fleming Road.
- Provide a minimum of 150 feet of left turn storage and a 100 foot bay taper on the southbound approach of the Fleming-Lewiston Road Connector. Provide a minimum of 100 feet of right turn storage and a 100 foot bay taper on the southbound approach of the Fleming-Lewiston Road Connector.
- The three-lane cross-section that is proposed along Fleming Road from the Fleming-Lewiston Road Connector through the project site should provide adequate storage for the left turn movement.
- Provide a minimum of 200 feet of left turn storage and a 100 foot bay taper on the westbound approach of the Fleming-Horse Pen Creek Road Connector.
- Coordinate improvements with Portrait Homes development improvements.

Intersection of Fleming-Lewiston Road Connector and Western Urban Loop EB Ramp

- Provide a minimum of 200 feet of right turn storage on the northbound approach of the Fleming-Lewiston Road Connector. Extend a full right turn lane between the on-ramp and Site Access 4.
- Provide a minimum of 200 feet of left turn storage and a 100 foot bay taper on the southbound approach of the Fleming-Lewiston Road Connector.
- Coordinate improvements with the Western Urban Loop interchange project.

Intersection of Fleming-Lewiston Road Connector and Western Urban Loop WB Ramp

- Provide a minimum of 375 feet of left turn storage and a 100 foot bay taper on the northbound approach of the Fleming-Lewiston Road Connector.
- Coordinate improvements with the Western Urban Loop interchange project.

Intersection of Fleming-Lewiston Road Connector and Site Access 1

- Provide a minimum of 100 feet of left turn storage and a 100 foot bay taper on the northbound approach of the Fleming-Lewiston Road Connector.
- Provide a minimum of 100 feet of left turn storage and a 100 foot bay taper on the southbound approach of the Fleming-Lewiston Road Connector.
- Provide a one-lane eastbound approach consisting of an exclusive right turn lane.
- Provide a one-lane westbound approach consisting of an exclusive right turn lane.

Intersection of Fleming-Lewiston Road Connector and Site Access 2

- Install traffic signal.
- Provide a minimum of 100 feet of left turn storage and a 100 foot bay taper on the northbound approach of the Fleming-Lewiston Road Connector.
- Provide a minimum of 100 feet of left turn storage and a 100 foot bay taper on the southbound approach of the Fleming-Lewiston Road Connector. Provide a minimum of 100 feet of right turn storage and a 100 foot bay taper on the southbound approach of the Fleming-Lewiston Road Connector.
- Provide a two-lane eastbound approach [at a minimum] consisting of an exclusive left turn lane and a shared left-through-right lane.
- Provide a two-lane westbound approach consisting of an exclusive left turn lane and a shared through-right lane.

Intersection of Fleming-Lewiston Road Connector and Site Access 3

- Install traffic signal.
- Provide a minimum of 200 feet of left turn storage and a 100 foot bay taper on the northbound approach of the Fleming-Lewiston Road Connector. Provide a minimum of 100 feet of right turn storage and a 100 foot bay taper on the northbound approach of the Fleming-Lewiston Road Connector.
- Provide a minimum of 100 feet of left turn storage and a 100 foot bay taper on the southbound approach of the Fleming-Lewiston Road Connector. Provide a minimum of 100 feet of right turn storage and a 100 foot bay taper on the southbound approach of the Fleming-Lewiston Road Connector.
- Provide a two-lane eastbound approach [at a minimum] consisting of an exclusive left turn lane and a shared left-through-right lane.
- Provide a two-lane westbound approach consisting of an exclusive left turn lane and a shared through-right lane.

Intersection of Fleming-Lewiston Road Connector and Site Access 4

- Provide a minimum of 100 feet of right turn storage and a 100 foot bay taper on the southbound of the Fleming-Lewiston Road Connector.
- Provide a one-lane eastbound approach consisting of an exclusive right turn lane.
- Provide a one-lane westbound approach consisting of an exclusive right turn lane.
- It would be desirable to relocate this driveway connection approximately 300 feet from the Western Urban Loop's Eastbound Ramp, particularly the westbound approach in order to reduce the possibility of queues from the ramp backing up and blocking the driveway during peak times.

Intersection of Fleming Road and Site Access 5

- Provide a minimum of 100 feet of left turn storage and a 100 foot bay taper on the eastbound approach of Fleming Road. As previously mentioned, the three-lane cross-section that is proposed to be constructed from the Fleming-Lewiston Road Connector through the project site should provide adequate storage for the left turn movement.
- Provide a two-lane southbound approach consisting of an exclusive left turn lane and an exclusive right turn lane.

Intersection of Fleming-Horse Pen Creek Road Connector and Site Access 6/Portrait Homes

- Provide a median crossover at this location in order to provide full access to the proposed development on the northern side. Align this access with the access to the Portrait Homes site on the southern side.
- Provide a minimum of 100 feet of left turn storage and a 100 foot bay taper on the eastbound approach of the Fleming-Horse Pen Creek Road Connector.
- Provide a minimum of 100 feet of left turn storage and a 100 foot bay taper on the westbound approach of the Fleming-Horse Pen Creek Road Connector.
- Provide a two-lane southbound approach consisting of a shared left-through lane and an exclusive right turn lane.
- Provide a two-lane northbound approach consisting of a shared left-through lane and an exclusive right turn lane.